

In the Claims

1 – 11 (cancelled).

12 (currently amended). A method for reducing the expression of a respiratory syncytial virus (RSV) gene and RSV viral titer in a mammalian subject, comprising administering a polynucleotide nanoparticle to airway cells in the subject, wherein the nanoparticle comprises a polynucleotide conjugated to chitosan, wherein the polynucleotide comprises a nucleic acid sequence targeted to a target nucleic acid sequence within the RSV gene or an RSV transcript, wherein the polynucleotide is a small interfering RNA (siRNA) or expresses a small hairpin RNA (shRNA), and wherein the polynucleotide nanoparticle is administered in an effective amount to reduce expression of the RSV gene or transcript in the airway cells and reduce RSV titer in the subject.

13 (original). The method of claim 12, wherein the subject is suffering from an RSV infection.

14 (original). The method of claim 12, wherein the subject is not suffering from an RSV infection.

15 (original). The method of claim 12, wherein the subject is human.

16 (original). The method of claim 12, wherein the subject is a non-human mammal.

17 (currently amended). The method of claim 12, wherein the ~~polynucleotide~~ is administered such that the polynucleotide is delivered to cells within the subject selected from the group consisting of airway cells are respiratory epithelial cells, ~~dendritic cells, and monocytes.~~

18 (currently amended). The method of claim 12, wherein the ~~polynucleotide~~ nanoparticle is administered to the subject intranasally.

19 (currently amended). The method of claim 12, wherein the ~~polynucleotide~~ nanoparticle is administered intranasally as drops or as an aerosol.

20 (original). The method of claim 12, wherein said administering comprises administering a combination of polynucleotides that reduce the expression of both RSV NS1 and NS2 within the subject.

21 (original). The method of claim 12, wherein the polynucleotide is an siRNA and wherein the siRNA reduces expression of RSV NS1 and NS2 within the subject.

22 (original). The method of claim 12, wherein the RSV gene or transcript encodes a polypeptide that reduces production of type-I interferon by monocytes and dendritic cells within the subject.

23 (cancelled).

24 (original). The method of claim 12, wherein the polynucleotide further comprises an operably linked promoter.

25 (currently amended). The method of claim 12, wherein the polynucleotide further comprises an operably linked regulatory sequence, wherein the regulatory sequence is a surfactant protein B promoter, a steroid response element, or both.

26 (original). The method of claim 12, wherein the polynucleotide is administered in an amount effective to increase type I interferon within the subject.

27 – 31 (cancelled).

32 (new). The method of claim 12, wherein the polynucleotide is an siRNA.

33 (new). The method of claim 12, wherein the polynucleotide expresses an shRNA.

34 (new). The method of claim 12, wherein the target nucleic acid sequence is within the RSV NS1 gene or transcript.

35 (new). The method of claim 12, wherein the nanoparticle inhibits RSV-induced lung inflammation in the subject.

36 (new). A method for enhancing cellular immunity to respiratory syncytial virus (RSV) and attenuating re-infection by RSV in a mammalian subject, comprising administering a nanoparticle to airway cells in the subject before or after an initial RSV infection, wherein the nanoparticle comprises a polynucleotide conjugated to chitosan, wherein the polynucleotide comprises a nucleic acid sequence targeted to a target nucleic acid sequence within the RSV gene or an RSV transcript, wherein the polynucleotide is a small interfering RNA (siRNA) or expresses a small hairpin RNA (shRNA), wherein the nanoparticle is administered in an effective amount to reduce expression of the RSV gene or transcript in the airway cells and reduce RSV titer in the subject, and wherein cellular immunity to RSV is enhanced and re-infection by RSV is attenuated.

37 (new). The method of claim 36, wherein the target nucleic acid sequence is within the RSV NS1 gene or transcript.

38 (new). The method of claim 36, wherein the polynucleotide is an siRNA.

39 (new). The method of claim 36, wherein the polynucleotide expresses an shRNA.

40 (new). The method of claim 36, wherein the nanoparticle is administered before the initial RSV infection.

41 (new). The method of claim 36, wherein the nanoparticle is administered in a single dose.

42 (new). The method of claim 36, wherein the nanoparticle is administered after the initial RSV infection and before the re-infection by RSV.

43 (new). The method of claim 14, wherein the nanoparticle is administered in a single dose.